

## ABSTRACT OF THE DISCLOSURE

The present invention relates to novel bacterial hemoglobin receptor proteins and genes that encode such proteins. The invention is directed toward the isolation, characterization, diagnostic and therapeutic use of bacterial hemoglobin receptor proteins, nucleic acid encoding such proteins, recombinant expression constructs comprising such nucleic acids and cells transformed therewith, and antibodies and epitopes of such hemoglobin receptor proteins. The invention relates particularly to hemoglobin receptor proteins and genes encoding such proteins from *Neisseria* species, especially *N. meningitidis* and serotypes thereof, and *N. gonorrhoeae*. Methods for the diagnostic and therapeutic use of the proteins, epitopes, antibodies and nucleic acids of the invention are also provided, including the use of the proteins, epitopes, antibodies and nucleic acids of the invention for the production of vaccines effective in providing immunization of a human against infection by pathogenic bacteria of *Neisseria* species.

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